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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/026,329

12/19/2001

David Vance

ARC 1016-042

10 8072

7590

09/10/2003

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EXAMINER

METZMAIER, DANIEL S

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/026,329

Applicant(s)

VANCE ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) 11-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

Claims 1-8 and 10-21 are pending. The amendment filed June 30, 2003 has been received.

#### ***Election/Restrictions***

1. Claims 11-21 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5

#### ***Priority / Oath/Declaration***

2. The following two issues relate to an inconsistency with the provisional filing date. The following issues will remain until correction of said issue by either the filing date of the provisional application or the correcting the following issues.

#### ***Priority***

3. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

***Oath/Declaration***

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The filing date of the provisional application set forth in the declaration does not correspond with the Patent Office Records.

***Specification***

5. The use of the trademarks (page 13, lines 6-11) have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology. Said trademarks should include a generic chemical structure rather than a generic functional description as dispersants.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-2 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyer, US 4,080,177. Boyer (examples) discloses comminuting metallic particles in dry kerosene to obtain a dispersion having a particle size of 1 to 500 millimicrons. This equates to 1 to 500 nanometers (nm), which is a nanoscale metallic colloid.

Boyer differs from the instant claim 1 in the exemplified further addition of a dispersant, the particle size of the starting material and/or the sequence of steps.

Boyer (examples) discloses comminuting metal particles in an organic liquid with a source elemental metal material having 400 mesh size resulting in a colloid having from 1 to 500 nm. Applicants' claims define an source elemental metal as having 1 to 10 microns.

To the extent Boyer differs in that the source elemental metal particles are larger than 1 to 10 microns, Boyer employs 400 mesh magnesium metal. Said characterization is understood as magnesium metal particles passing through a 400 mesh sieve or particles less than about 37 microns.

Furthermore, the resulting colloids of Boyer have been comminuted to a size of 1 to 500 nm and would have been expected to at least have a particle size within the range of 1 to 10 microns during the comminuting.

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Also, comminuting necessarily results in agitation.

Furthermore, the order of adding ingredients has been held to be *prima facie* obvious. See MPEP 2144.02(IV)(c). Applicants have not shown the particle size of the source elemental metal of 1 to 10 microns to be critical to the claimed invention.

Boyer (column 5, lines 9 et seq) teaches the addition of a suspending agent may be desirable. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ a dispersant as disclosed in the Boyer reference for the art recognized advantage of suspension stability. Boyer teaches the use of dry kerosene which implicitly reads on or suggest a drying step to obtain the dry kerosene. The dry kerosene implicitly reads on or at least suggest anaerobic solution storage since the liquid compositions would be contained in a closed vessel as a fuel.

To the extent Boyer differs from claim 8 in the non-aqueous organic liquid, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ dodecane as a known fuel and jet fuel component. The dispersants of claim 9 are commercial dispersants and would have been an obvious functional equivalent to those disclosed in the Boyer reference. The milling apparatus of claim 10 are commercial known in conventional engineering handbooks and would have been an obvious functional equivalent to those disclosed in the Boyer reference.

#### ***Allowable Subject Matter***

9. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

1. Applicant's arguments filed June 30, 2003 have been fully considered but they are not persuasive.
2. Applicants (page 5) assert applicants attempted to correct the filing date of the provisional application Serial No. 60/257,917. The examiner is unaware of said attempt and has been unable to find said attempt. It is noted that filing date corrections are a petitionable issue to The Office of the Deputy Commissioner for Patent Examination Policy. See MPEP 1002.02(b), item 27. A provisional application is a filing under 37 CFR 1.53(c).
3. Applicants (page 7) assert the Boyer reference does not disclose the source material in the range of 1 to 10 microns. Boyer employs 400 mesh magnesium metal. Said characterization is understood as magnesium metal particles passing through a 400 mesh sieve or particles less than about 37 microns.

Furthermore, the resulting colloids of Boyer have been comminuted to a size of 1 to 500 nm and would have been expected to at least have a particle size within the range of 1 to 10 microns during the comminuting.

4. Applicants (page 7) assert the Boyer reference does not disclose step (e), agitation. Agitation is a necessary result of comminuting.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on (703) 308-2340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1712

DSM